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M U D P I E no. 24

Museum and University Data, Program and Information Exchange

COMPUTER INVENTORY OF THE FLORA OF COLORADO

Published floras are expensive, not only considering the actual costs of publication but in terms of the support of the research that goes into their organization. Once a comprehensive flora is published, revisions are rarely produced in convenient time intervals, and the problem of updating the inventory arises. Most active state herbaria have some method of coping with updating such as card files or publication of "additions" papers, but no good system has yet been devised that will bring the updated flora to other workers who could use the new information to advantage. The University of Colorado Museum has produced a computer inventory of the Colorado Flora that performs this function. The inventory not only covers the vascular flora, but the bryophytes and lichens as well, and is so organized that any other groups can be accommodated within its program. It can also be utilized as a bank for the incorporation of data on taxa whose type stations are in Colorado. The entire inventory is available on microfiche or printed copy, but subsets of items can be furnished for specific purposes.

In its present form the Colorado Inventory stores the following bits of information: the name of the plant as reported, indication of our acceptance of the name, or reference to the name we do accept; the family or a category above the family; indication of indigeny or adventiveness; nature of the record; bibliographic references for nomenclatural or taxonomic sources; and bibliographic record for source of report. There are 14 such "descriptors" at the present time, but the program permits additions of others whenever desirable. The file is constantly updated so there is always an up to the minute record of the known flora of the state. Elements in the file can be added, removed or modified as necessary. The sorting program is written in COBOL, and has been completely de-bugged and tested. Further information is available upon request.--William A. Weber, University of Colorado Museum, Boulder CO 80302.

AG/PACK

AG/PACK (AGricultural Personal Alerting Card Kits) is a service of the Scientific Documentation Centre, Ltd., U.K., and is distributed in the U. S. by Science Associates/International, Inc., 23 E. 26th St., New York NY 10010. It is a weekly international current awareness service, covering the literature in any of a list of more than one hundred areas of science. They are currently

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offering a trial package for four weeks that will give anyone an opportunity to see how well they cover a field. They claim to scan over 7000 items a week, covering over 3250 journals. The trial price is based on one/tenth of a year's subscription, and ranges from $7.20 on up. A complete list of the fields of interest covered can be obtained from the New York address, with the price for four weeks, but the following might be of immediate interest:

Computers (complete) $39.60
Computers--Information Retrieval $12.60
Computers--Medical and Life Sciences Application $9.00
Computers--Physical Sciences Applications $12.60.

DISTRIBUTED COMPUTER SYSTEMS

MUDPIE No. 23 mentioned several current and experimental network systems worth keeping an eye on, and included among them was the DCS network, an experimental layout at the University of California, Irvine. I have now received a set of their publications concerning the net, as listed below:

Farber, D. J. & K. C. Larson. The systems architecture of the Distributed Computer System--the communications system. Mimeo--paper presented at the Polytechnic Institute of Brooklyn Symposium on Computer Networks, April, 1972.

Farber, D. J. & K. C. Larson. The structure of a Distributed Computing System--Software. Mimeo--paper presented at the Polytechnic Institute of Brooklyn Symposium on Computer-Communications Networks and Teletraffic, 1972(?).

Heinrich, F. The structure of a Distributed Computing System-The distributed file system. Mimeo, 13 pp. and 3 figs.

Those interested in further information on this potential network can contact Dr. David J. Farber, Information and Computer Science, University of California, Irvine, CA 92664.--JAP.

RECENT LITERATURE

Cooley, W. W. and P. R. Lohnes. Multivariate Data Analysis. Wiley, N.Y., 1971: x + 364.

Hruska, J. A short review of data processing in the earth sciences in Czechoslovakia. Journal of the International Association for Mathematical Geology, vol. 3, 1971: 369-373.

Pall, G. A. Introduction to Scientific Computing. Appleton-Century-Crofts, N.Y., 1971:xiv + 677.

Reyment, R. A. Multivariate normality in morphometric analysis. Journal of the International Association for Mathematical Geology, vol. 3, 1971: 357-368.

M U S T A R D

(Museum and University STorage And Retrieval of Data)

MUSEUM DATA BANK STUDY GROUP
Report of Meeting at
Hershey, Pennsylvania
March 27-28, 1972

Submitted by
Robert G. Chenhall

The idea of using a computer in place of a museum catalog card is scarcely more than five or six years old. However, at least five major information systems (i.e., GIPSY, GIS, GRIPHOS, SELGEM, and TAXIR) already have been developed to record museum data, and perhaps twenty or more institutions are now converting to computerized catalog systems. As a result of this proliferation of museum data banks, museum directors and curators contemplating the use of computers, either for collection management or for research purposes, are faced with a multiplicity of computer hardware and storage and retrieval systems which might fulfill their needs. In some cases there is an apparent competition between these systems, and there is a general lack of knowledge as to what each system will and will not do, the costs of operating under different systems, alternate methods of feeding data into the computers, and so on. There is at present no central office where a potential user can obtain objective and reliable information or assistance in getting started with a computerized museum data bank. Likewise, individuals actively working with data banks have found themselves constantly confronted with requests for information, ranging from the most elementary instructions on what a data bank will do to requests for free consulting services, and they have felt an increasing need for some kind of a centralized organization or office to coordinate their efforts and to prevent as much duplication of programing activities as possible. The Hershey Study Group meeting was organized in an effort to provide answers to these several needs.

The meeting at the Hotel Hershey was funded by the Office of Museum Programs of the Smithsonian Institution (Frederick Schmid, Director), and organized jointly by Drs. James F. Mello and Robert G. Chenhall. Participants were selected: (1) to include representation from each of the five major systems; (2) to include persons from as many different disciplines as possible;

and (3) to include only individuals who were actively working with and concerned about the future of museum data banks. Ten persons actively took part in the deliberations.

The general recommendation of the Hershey Study Group was that an organization should be created, with an executive office to serve as a central nerve center for the communication of data bank information to museums and a point of coordination among existing museum data banks. Some of the specific functions of this organization would be as follows:

1. To develop comparative descriptions of the general information systems that are presently available so that a potential new user would have an objective basis for deciding which system was most appropriate to his needs.

2. To serve as a clearing house of data categories and minimal standard recording conventions for all museum data banks, so that data recorded in one of the systems will be compatible with that recorded in other systems. This activity would be carried out by working with specialists from each discipline. Standard recording conventions would be recommended only for such categories as dates, proper names, etc., or when requested by a representative body of scholars from a particular discipline.

3. To coordinate and disseminate information to all interested parties concerning new developments in the use of museum data banks.

4. To supply information and (for a fee) consultants to work with potential new users.

5. To serve as a central point for the communication of information to and from other data bank organizations around the world.

6. To coordinate the development of programs for the conversion of data from one system to another and the collection of data that have been recorded in more than one of the five systems (the fact that such conversion is possible has now been demonstrated between the SELGEM and GRIPHOS systems).

7. To coordinate future system refinements, so that data recorded in any one of the systems can be processed substantially unchanged in any of the other systems.

8. At a later date, when sufficient information has been gathered in data banks across the country, to coordinate or contract for the synthesis of actual data for specific disciplines on a regional or national basis.

The name selected for the new organization is the Museum Data Bank Coordinating Committee. During the first two years

from July 1, 1972, it was suggested that the organization should be free-floating--i.e., with the executive office located wherever the Executive Director may be situated rather than attached to any present organization or institution. Membership will be divided into two classes: (1) organizational representatives from the American Association of Museums, the American Association of State and Local History, the National Science Foundation Office of Science Information Services, the National Museum Act Program, the Directors of Systematic Collections, and other organizations which represent any large group of museums or museum-related disciplines; and (2) individual membership for any person who meets certain minimal requirements (essentially anyone working with or developing a museum data bank). The affairs of the Committee would be carried on by an Executive Board and an Executive Director. Initially, an Organizing Committee consisting of those who participated in or were invited to the Hershey Study Group meeting will function as the Executive Board. When the organization is better established, the Executive Board will be elected by the membership so as to represent a balance of the different computer systems, different disciplines and different kinds of museums located in different geographic areas. It is the intention of the Study Group that members of the Executive Board would serve as the points of contact between the Executive Office and any discipline -related programs, so that the needs of particular disciplines would be protected but still integrated into the larger structure. The Executive Office initially will be staffed by the Executive Director and an administrative secretary. Computer consultants will be employed on a contract basis to carry out specific projects.

For the first two years Dr. Robert G. Chenhall has agreed to serve as Executive Director of the Museum data bank Coordinating Committee. He is located at the University of Arkansas and will prepare a grant request under the National Museum Act for the funding of the Committee's activities from July 1, 1972 to June 30, 1974. Any comments, suggestions or requests for information should be addressed to him at the University of Arkansas Museum, Fayetteville, Arkansas 72701.

May, 1972
Division of Reptiles and Amphibians
National Museum of Natural History
Washington, DC 20560